

# Where is the Qfly hotspot risk?



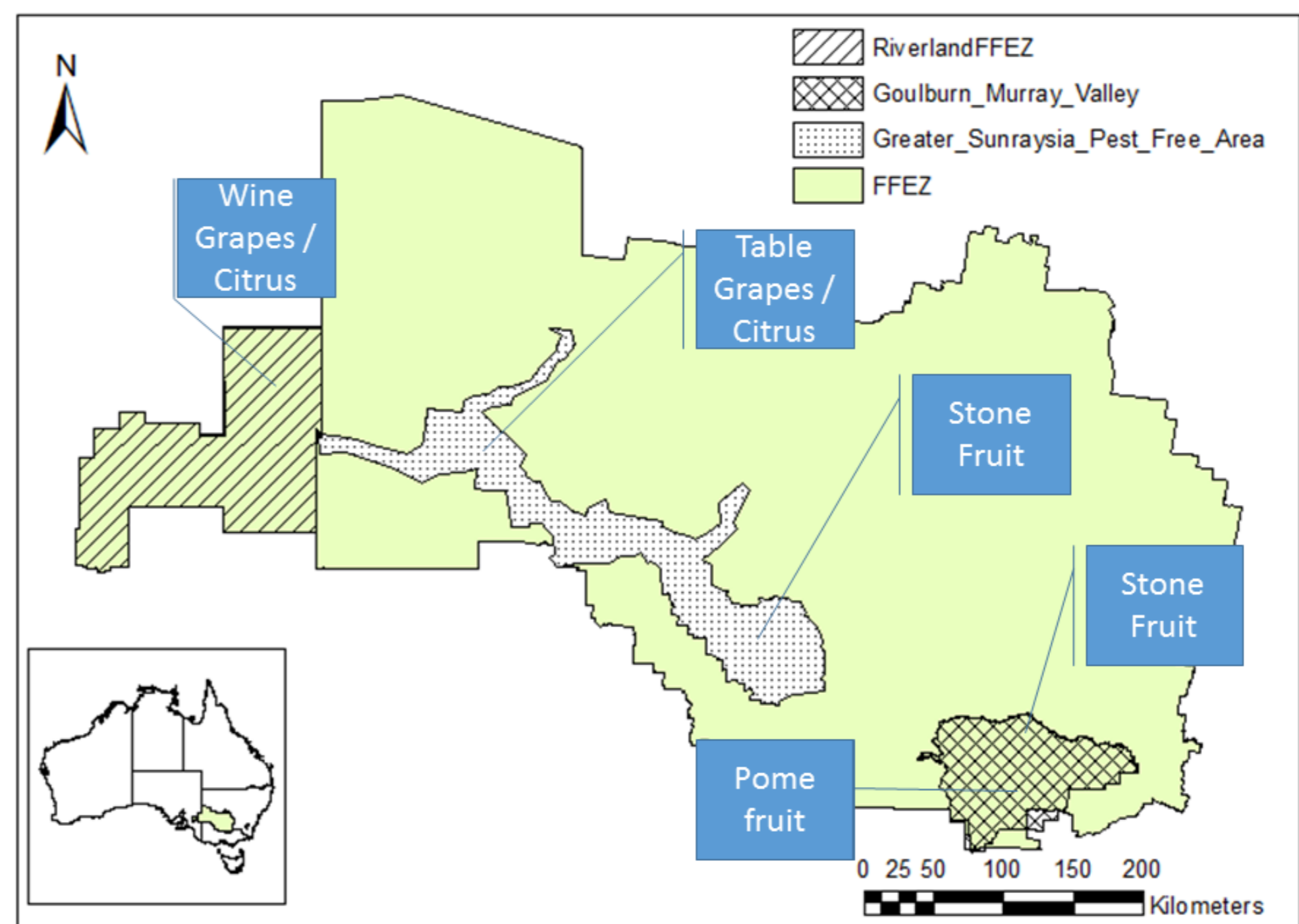
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**SITplus**

## Questions:

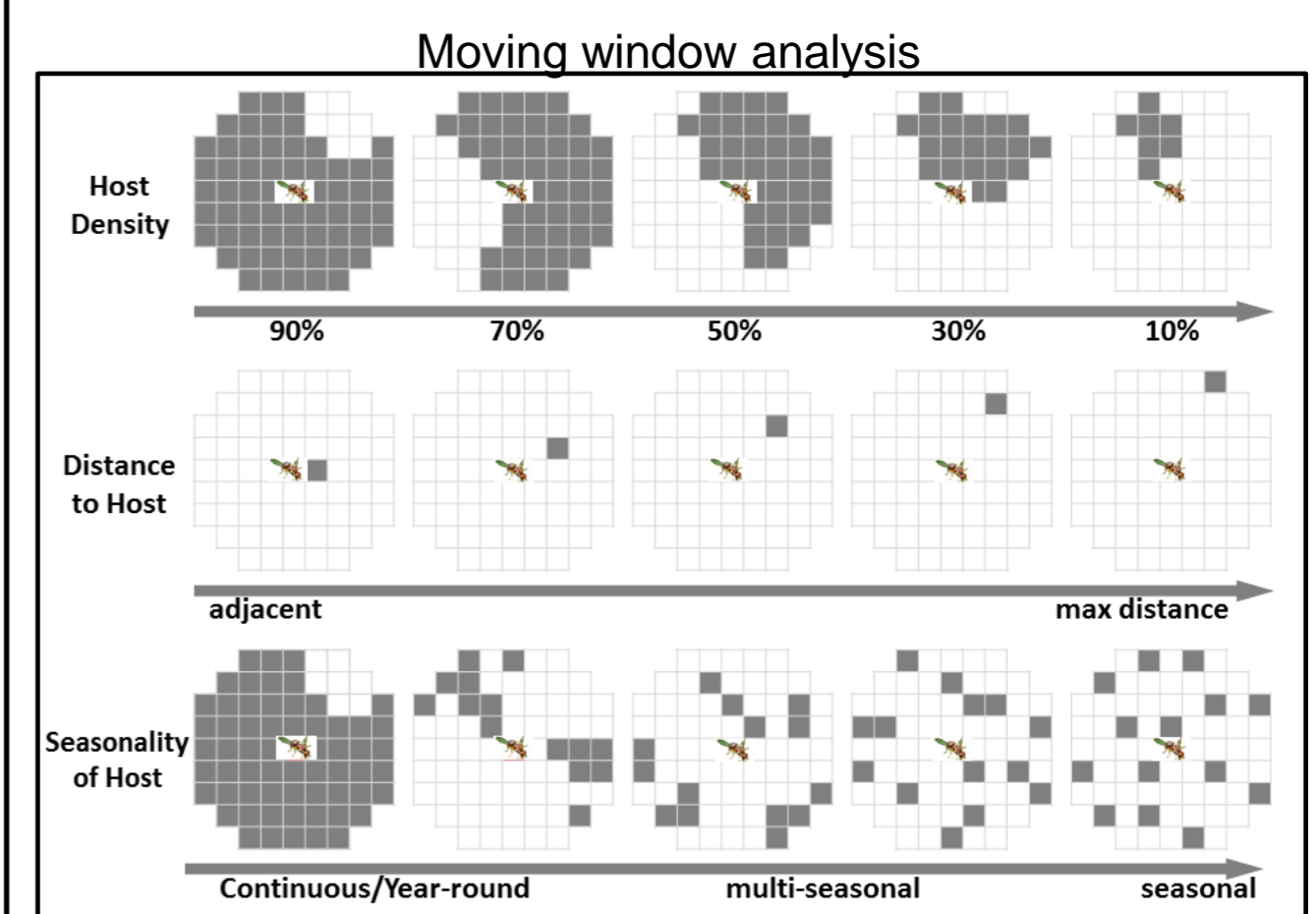
- What is the potential risk of Qfly persisting in the landscape?
- How does that risk differ across the different fruit-growing regions?
- How likely is a commodity to be stung?
- Will larvae develop in the stung fruit?



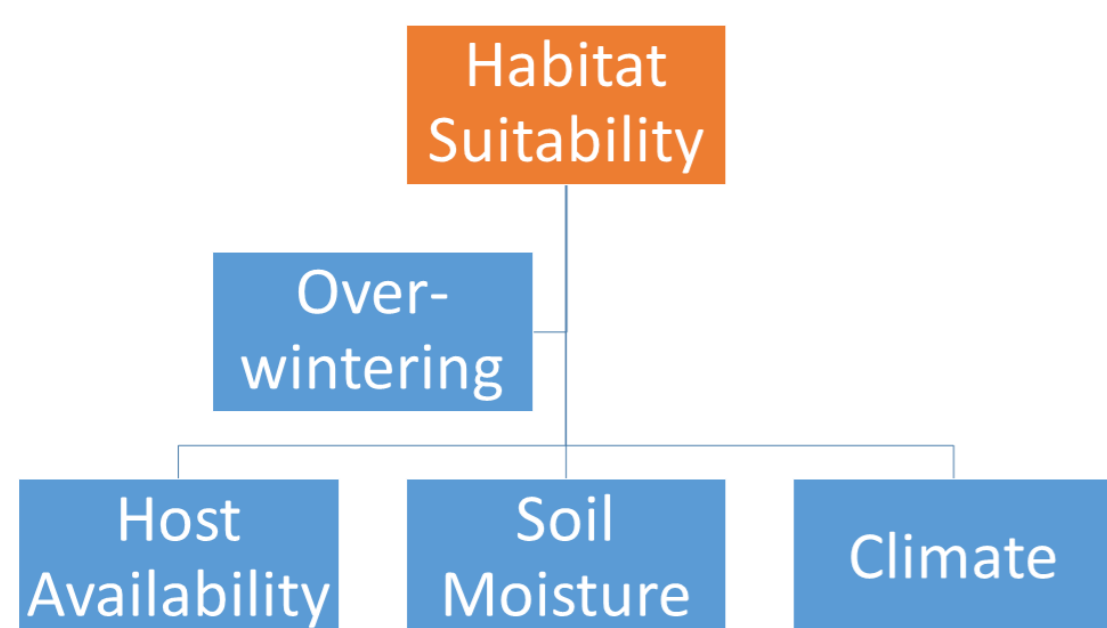
## How does that risk differ across regions?

### Phases:

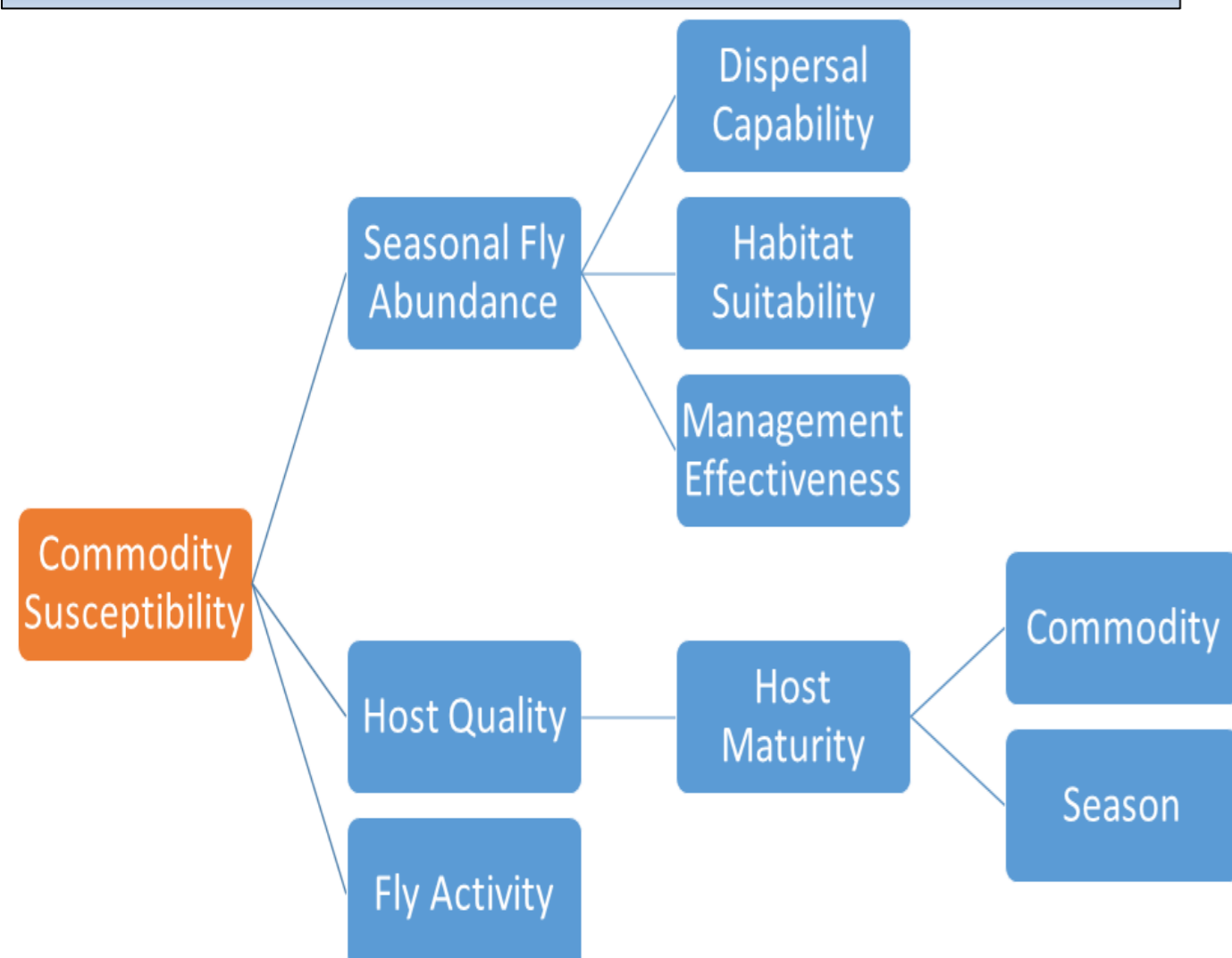
1. Expert workshop to obtain expert knowledge on the ecological requirements of the species
2. Develop habitat suitability model for Qfly persistence and a habitat susceptibility model for the potential of a commodity being stung and larvae developing
3. Moving window analysis to capture potential daily fly movement in relation to availability of hosts (host preference, host density, host seasonality)
4. Landscape connectivity analysis to predict potential dispersal pathways between habitat patches
5. Model the effectiveness of management (whether integrated management and area-wide management is occurring and its frequency) to reduce risk



Capturing the importance of the landscape matrix in daily movement for this mobile species



Simplified versions of the habitat suitability model (above) and the susceptibility model (below).

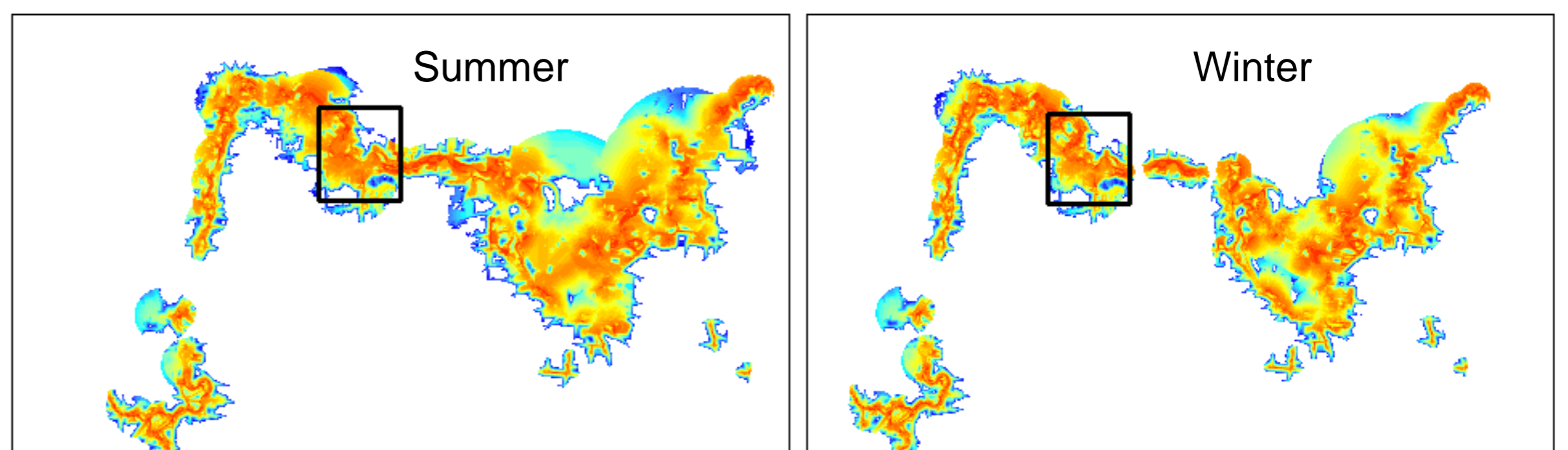


### Model outputs:

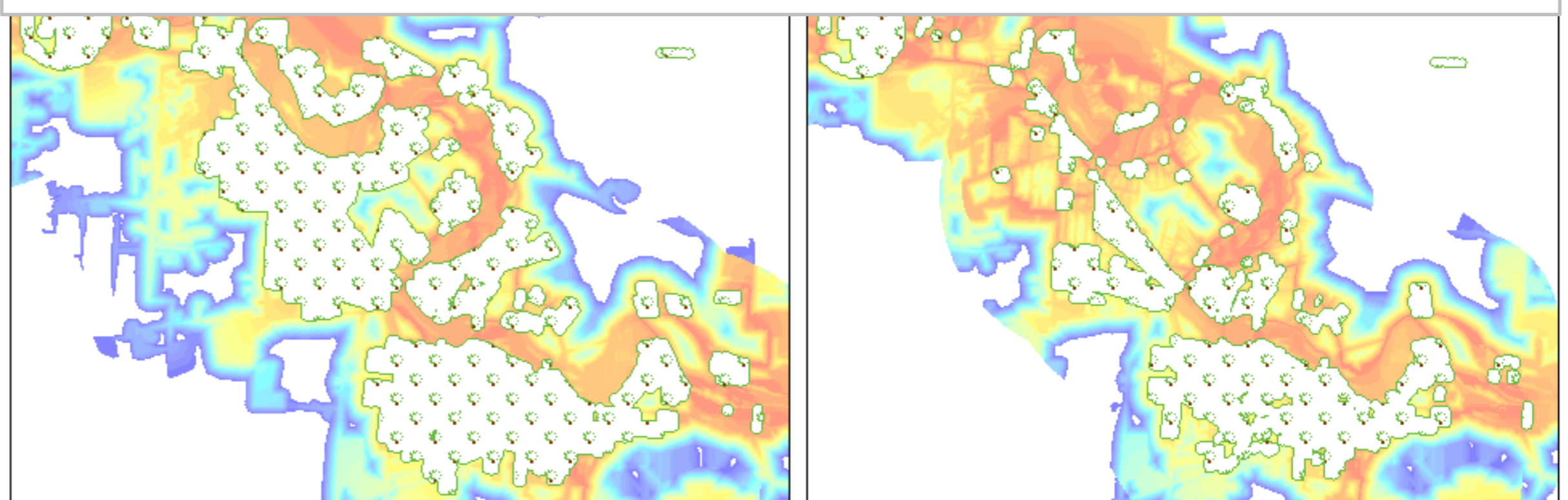
- provide regional maps of suitable areas for Qfly persistence
- identify potential hotspots for targeted management
- propose corridors of movement or stepping stones that will need to be managed
- link to other project components

### Model outcomes:

- Increase understanding how Qfly populations use the landscape
- Assist managers in identifying high risk areas



Likely movement corridors associated with summer and winter hosts. Bottom maps show zoomed in area defined by box in top maps. Red represents the most likely movement corridor.



Potential movement corridors between habitat patches in different seasons



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